IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claim 1. (currently amended): A stacked photovoltaic element comprising a plurality of unit photovoltaic elements each composed of a pn- or pin-junction, connected to each other in series,

wherein a zinc oxide layer is provided ~~at least one position~~ between ~~the~~ two consecutively stacked unit photovoltaic elements, and the zinc oxide layer has resistivity varying in a thickness direction thereof, and wherein both surfaces of the zinc oxide layer are in contact with different unit photovoltaic elements, and a resistivity of the zinc oxide layer on the surface in contact with a unit photovoltaic element near a substrate as seen from the zinc oxide layer is higher than a resistivity of the zinc oxide layer on the surface in contact with a unit photovoltaic element farther from the substrate as seen from the zinc oxide layer.

Claim 2. (original): The stacked photovoltaic element according to Claim 1, wherein zinc oxide of the zinc oxide layer on a side of being in contact with a p-layer of the pn- or pin-junction has a higher resistivity than that on a side of being in contact with an n-layer of the pn- or pin-junction.

Claim 3. (original): The stacked photovoltaic element according to Claim 2, wherein a resistivity of the zinc oxide continuously decreases in the zinc oxide layer from a side of the zinc oxide layer in contact with the p-layer towards a side of the zinc oxide layer in contact with the n-layer.

Claim 4. (currently amended): The stacked photovoltaic element according to Claim 1, wherein a resitivity of zinc oxide of the zinc oxide layer is 2100 ~~ÿcm~~ Ωcm or more but 5103 ~~ÿcm~~ Ωcm or less.

Claim 5. (currently amended): The stacked photovoltaic element according to Claim 1, wherein a high resistant portion of zinc oxide of the zinc oxide layer has 5102 ~~ÿcm~~ Ωcm or more but 5103 ~~ÿcm~~ Ωcm or less.

Claim 6. (original): The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of amorphous Si:H.

Claim 7. (original): The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of microcrystalline Si.

Claim 8. (original): The stacked photovoltaic element according to Claim 1, wherein at least one of the plurality of the unit photovoltaic elements has a pin-junction comprising an i-type layer composed of single-crystalline or poly-crystalline Si.

Claims 9 - 11. (canceled)

Claim 12. (currently amended): A method for producing a stacked photovoltaic element comprising an intermediate layer between unit photovoltaic elements each having a pn- or pin-junction, comprising the steps of:

stacking a first layer mainly composed of indium oxide on at least one interface with the unit photovoltaic element; and

stacking a second layer mainly composed of zinc oxide on and in direct contact with the first layer to form the intermediate layer, wherein the second layer is formed at a rate higher than that of the first layer.

Claim 13. (currently amended): A method for producing a stacked photovoltaic element comprising an intermediate layer between unit photovoltaic elements each having a pn- or pin-junction, comprising the steps of:

stacking a first layer mainly composed of indium oxide on at least one interface with the unit photovoltaic element; and

stacking a second layer mainly composed of zinc oxide on and in direct contact with the first layer to form the intermediate layer, wherein the second layer is formed at a temperature lower than that of the first layer.

Claims 14 - 17. (canceled)